



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,696	11/06/2001	John Eric Arnold	DN1999111USA	1392

27280 7590 03/22/2005

THE GOODYEAR TIRE & RUBBER COMPANY
INTELLECTUAL PROPERTY DEPARTMENT 823
1144 EAST MARKET STREET
AKRON, OH 44316-0001

EXAMINER


NGUYEN, XUAN LAN T

ART UNIT	PAPER NUMBER
----------	--------------

3683

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

 Office Action Summary	Application No.		Applicant(s)	
	10/009,696		ARNOLD ET AL.	
	Examiner		Art Unit	
	Lan Nguyen		3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12, 14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 14 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Objections

1. Claims 1, 16 and 18 are objected to because of the following informalities:

- In claim 1, line 7, "part" should be -- a part --.
- In claim 16, line 4, "the opposing end" should be -- an opposing end--.
- In claim 18, line 4, "different" should be --difference--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12, 14 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 12 and 14 have been amended to depend on claims 17 and 18.

However, the claim language of claims 12 and 14 is not consistent with the claim language of claims 17 and 18.

- In claim 18, a second axially outer surface is claimed without any reference to a first axially outer surface.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7, 12 and 16-19 are rejected under 35 U.S.C. 102(b) as anticipated by Ecktmann et al. (USP 5,201,500).

Re: claim 1, Ecktmann et al. show an airspring, as in the present invention, comprising: a flexible cylindrical sleeve 10 secured at opposing ends, and first 2 and second 12, 20 retainers, the sleeve being secured at a first end to one of the retainers, and at the opposing end to other retainer as shown, the improvement being characterized by: one of the retainers 12, 20 having a bumper-contact surface, please see the marked up figure below, within the sleeve 10 for axial movement into the sleeve, the bumper-contact surface formed as a part of the retainer 12, 20 and which contacts the other retainer when the air spring is collapsed, and absorbs and transmits forces generated from such contact, the bumper contact surface being centrally located on the surface of the retainer which extends into the sleeve during axial movement into the sleeve.

Art Unit: 3683

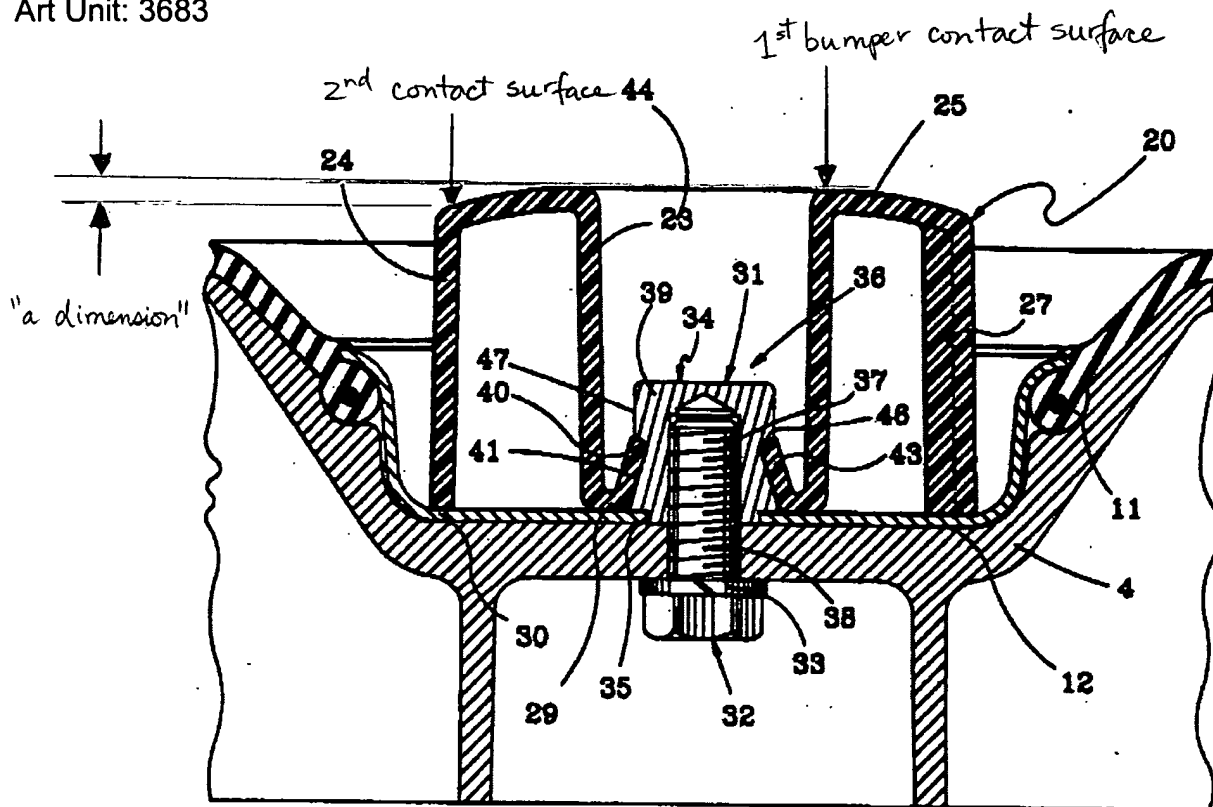


FIG. 4

Re: claims 2, 3 and 4, Ecktmann shows support ribs 43, 26, 27, 29, 30 wherein said ribs are substantially radially extending; and are a series of concentrically disposed.

Re: claim 5, Ecktmann shows the first contact surface to be closer to the center corresponds to rib 29, the second contact surface to be further out corresponds to rib 30 and are separated by a dimension, please see the marked up figure above.

Re: claim 7, Ecktmann shows piston 3, flexible sleeve 10 and bead rings 13 and 11.

Re: claim 16, Ecktmann et al. show an airspring, as in the present invention, comprising: a flexible sleeve 10 secured at opposing ends, a chamber 15 created by

Art Unit: 3683

the secured sleeve, a piston 3, and first 2 and second 12, 20 retainers, the sleeve 10 being secured at a first end to one of the retainers 2, and an opposing end of the sleeve being secured between the piston 3 and the other retainer 12, 20, wherein: one of the retainers 12, 20 has a centrally located axially outer surface, please see marked up figure above, the axially outer surface extends into the chamber during axial movement, wherein the axially outer surface of the retainer 12, 20 contacts the other retainer 2 when the air spring is collapsed.

Re: claim 17, Ecktmann shows ribs 43, 29, 30.

Re: claim 12, Ecktmann shows two concentrically disposed ribs 30, 29.

Re: claim 18, Ecktmann shows the axially outer surface to be closer to the center corresponds to rib 29, the second axially outer surface to be further out corresponds to rib 30 and are separated by a dimension, see marked up figure above.

Re: claim 19, Ecktmann shows the axially outer contact surface to be closer to the center corresponds to rib 29.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 6, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecktmann et al.

Art Unit: 3683

Re: claims 6 and 14, Ecktman's air spring, as rejected in claims 1 and 18 above, lacks the separation dimension, as claimed. The Examiner takes an Official Notice that this is a design choice in order to absorb the impact gradually, the separation dimension can be designed in different height ratios depending on each application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have designed Ecktman's air spring with a separation dimension between 20% to 80% of the retainer height in order to satisfy a required damping capability gradually.

Re: claim 20, Ecktman's air spring, as rejected in claim 16 above, lacks the "no separately formed and applied bumper". It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Ecktman's air spring to comprise a retainer with no separately formed and applied bumper, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecktman et al. in view of Koschinat et al. (USP 4,890,823).

Ecktman's airspring, as discussed in the rejection of claim 1 above, is silent of a material being used in the construction of the second retainer. Koschinat et al. teach the concept of using a glass fiber-reinforced plastic material in the construction of retainer 1, column 2, lines 7-18 to lighten the weight of the retainer as well as providing a non-corrosive retainer that could withstand the force of contact from the upper retainer. It would have been obvious to one of ordinary skill in the art at the time the

Art Unit: 3683

invention was made to have used a glass fiber-reinforced plastic material such as taught by Koshinat in the construction of Ecktmann's retainer in order to lighten the weight of the retainer as well as providing a non-corrosive retainer that could withstand the force of contact from the upper retainer. Regarding the claimed tensile and flex strengths in claim 8, these are considered design choices and would have been different to each airspring depending on the vehicle that the airspring is being designed.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot since the claimed limitation "integrally formed" has been deleted from the claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lan Nguyen
Patent Examiner
Art Unit 3683



3/15/05